

Meeting Notes Sea Ice Flight Lines 1/11/2010

Participants: Lora Koenig, Seelye Martin, Dave McAdoo, Sinead Farrell, Ron Kwok, Larry Connor, Bill Krabill

Telecon began at 1200 pacific

Seelye started with a question to Dave McAdoo, Will NOAA be paying for flights? Dave: Yes NOAA is very willing to pay for a day or two of flights and needs to get a MOU in place between NOAA and NASA to transfer money. NOAA and NASA are in the process of establishing this agreement.

Seelye Question 2 to Dave, What kind of lines would you like to fly? Dave would like to fly beneath EnviSat, or possible a CryoSat-2 under flight on Sea Ice if CryoSat-2 is ready. Lora reported later that she has contacted Duncan Wingham asking for input from CryoSat-2's team on validation flights.

Bill Krabill clarified Dave's point that they would prefer a CryoSat-2 underflight to an EnviSat under flight if possible.

Sinead commented that they should plan an CryoSat-2/EnviSat orbit close to a region they have surveyed in recent years Perhaps flights due west of Ellesmere Island or North of Greenland over thick multiyear sea ice.

Seelye noted he was impressed last year with the variety of sea ice types observed on this EnviSat line.

Question: Do people want to refly the Thule-Fairbanks line? Absolutely

Do you want to repeat same Fairbanks flights as last year? Ron: Important to fly the same lines as last time in 2009.

Question: What are the dates of flight lines?

Lora: The Sea Ice Flights are scheduled for March 23-April 2, 2010. Then the P-3 will return to Wallops to load additional radars (April 2-19, 2010) and return for Ice Sheet flights April 20- May 20, 2010. The P-3 will carry the Kansas Snow Radar, the Digital Mapping System (DMS), and ATM for March 23-April 2 2010 deployment, with the possibility of loading LVIS.

Sinead: Will there be a gravimeter on board for Sea Ice? Lora: No, it is currently not planned to be on board.

Will there be a May sea ice flight? Lora: It is currently not planned. There was a question to Ron when melt occurs in the May time frame. Comment was made that flights occurred on May 17 and 18th in 2002 over Fram Strait and melt onset was not a problem.

Krabill clarified that Ice Sheet flights (April 20- May 20, 2010) would start in southern Greenland and end in northern Greenland at Thule so there is the possibility of getting a later sea ice flight in.

Bill noted that we will know more about CryoSat-2 in mid May than in late March and this would have to be considered as a trade off in planning flight lines.

Question from Seelye: Fram Strait flight- Do we want to repeat in late March-early April? Sinead: yes we do. We want to get flux measurement. We would like it to be close in time to last year's flight which occurred April 1 or 2, 2009.

(Dave or Larry) Does anyone think it is interesting to fly over ULS's on the Fram Strait flight and where are the buoys currently? (Ron) They are around 78 N which is south of what we flew last year. [From Dave McAdoo: 3 UPS (described as Ice Profiling Sonars) were deployed by the Norwegian Polar Institute in late summer 2009 along an E-W line at 78 deg 50 min north running from 3 deg W to 8 deg W.]

Seelye summed up the flights agreed upon so far: Fairbanks line x2 (Over and Back), CryoSat-2/Envisat under-flight line, Flight to Svalbard and return (round trip over Fram Strait). This is a total of 5 flights.

Bill says there is interest in going to Svalbard to re-fly the 1996, 2002 lines from ATM. This adds one or 2 land ice flights. This could add to the CryoSat validation efforts. It is OK not to have the ice penetration radar for these flights because they already have bed map data. This gives the option of staying a few days in Svalbard. Lora commented that this will remain an option that will be presented at the end of January but that it will get cut if it delays the plane in returning to Wallops between April 2-5th, 2010.

Ron commented on two targets of opportunity for flights. First on the flight plan to Thule can we overfly Baffin Bay or on the way back from Thule? Bill thinks it would be easier to fly this line on the way back from Thule. Seelye also wants to add the North Water. Proposes an additional flight that would include Nares Strait, Baffin Bay and North Water.

Ron later comments on a second target of opportunity flight for the fast ice on the edge of the Alaskan coast. This could get picked up on the flights to and from Fairbanks.

Sinead recommends a flight in the Lincoln Sea north of Greenland. Dave comments that the Lincoln Sea would be a great EnviSat and/or CryoSat-2 line.

Ron comments on that last year there was a zigzag north of Greenland flown by LVIS. No one has seen this LVIS data yet but it would be nice to have this flight again as an ATM flight.

Lora asks if the Sea Ice community would like LVIS on board for their flights? There are comments that this can be discussed more later once they see some of the data. They have not seen any of the LVIS data over sea ice from last year. Lora states that there is a trade off between flying LVIS or flying the snow radar and ATM. Ron says that if he had to choose it is snow radar and ATM if resources are limited. Later in the meeting this was discussed again: Do we want to fly the zigzag with LVIS or ATM or flying the Nares Strait again if there is an ice bridge forming there. Ron says he is monitoring imagery until the end of January to see if the Nares ice bridge forms. If there is a bridge, we should definitely fly it. We should also definitely fly the zigzag but not necessarily with LVIS.

Sinead comments that AWI conducted a comparison in the Lincoln Sea between ASIRAS (CryoSat-2 simulator) and a laser altimeter and did not see a big difference in the first week of May between the sea ice and snow on sea ice. It would be nice to have a handle on snow depths so she thinks this is a good area to look at again.

Ron asks Bill about the ATM camera not being contiguous with ATM data. Bill says he will check with Sirdar (spelling) about this.

Seelye asked if the DMS will be onboard. Lora: Yes DMS will be on board. This is the John Averson (at NASA AMES) instrument.

Will the snow radar be in better shape this year (Ron)? Lora believes it will be in the same configuration as last year. Sinead: It is imperative to get the data from last year and see how good it is. Lora mentions that the instrument PI's will be required to show the data at the meeting the end of January. At this time the Sea Ice community will have time to adjust flight lines if they do not feel the previous data was sufficient.

Bill asks for additional clarification on flight time in hours. Lora mentions that last year there were about 40-50 hours of sea ice flights including the 15 hours from NOAA. The Ice Bridge budget is still not set but it is expected that Sea Ice will get at least this amount of hours again this year.

Ron suggestion to fly 3-D animation over sea ice for outreach. Lora said the animators are ready to take data as soon as possible and she will get in touch with Ron to get the data to the animators.

Ron suggests prioritized list of flight lines.

Seelye Summed up with Action items:

Check on snow radar data (Lora and Seelye)

Check on LVIS data for Sea Ice (Lora)

Check with Sirdar on sea ice flights for ATM data and video (Bill)

Prioritized list of flight lines (Ron)

NOAA will check on budget and MOU.

Telecon ended at 1300 pacific